

TECHNICAL COOPERATION BY THE GOVERNMENT OF JAPAN

PROPOSAL

By the Government of REPUBLIC OF THE SUDAN
for an expert, i. e., SEE ANNEX 1
to the Government of Japan.

Notes. - This form has been devised for the general guidance of the Government agencies concerned (JAPAN) in order to facilitate the supply of relevant information and data necessary to afford an adequate appreciation of the nature of the technical co-operation required. The careful completion of this proposal form will avoid much reference back and lead to speedier action.

1. Back ground Information

This section should show as precisely as possible the general nature of the project for which the expert is required, stating whether it comes within the Government's development programme. It is important to indicate whether the project is a new enterprise or whether it was started previously. In the latter case, any assistance received under other technical co-operation programmes (e.g. under United Nations auspices) should be stated. With regard to industrial enterprises, some impression of the size is important and the output and number of workers to be employed are useful indications. The type of process, make and age of industrial or scientific equipment with which the expert will be concerned should be specified. In the case of academic establishments, it is an advantage to know the number of annual intake of students, their level of attainment, numbers and status of existing staff and details of any research facilities and the level of research being undertaken. (Copies of brochures, annual reports, financial statements, calendars, syllabus of instruction etc. should be attached where applicable).

The Kartoum Training Hospital (Grant-project by Japanese Government 1982-1985).

This Hospital designed for training young doctors to become specialized doctors.

In the operation theatre of this project, young doctors need to be trained by a doctor who has the latest techniques and medical knowledge.

2. Specification for the post.*

(a) post title

See Annex I

(b) duties for which the expert will be responsible.

These should preferably be listed, and it is important to give as much detail as possible.

Teach young doctors and Technicians

(c) authority to whom expert will be responsible.

Ministry of health.

* It is essential that full particulars should be given. If the space provided is inadequate, they should be given on a separate sheet.

2. Specification for the post (Cont'd.)	(1) Specialist Doctors.
(d) Qualification and experience required and approximate age limits	(2) Technicians.
(e) number of personnel required.	See Annex I
3. In the case of continuous projects, give name and particulars of understudy or counterpart who is to work with the expert	
4. Terms and conditions of appointment: (a) duration	1 Month
(b) actual place of employment, nearest town and post office	Phartoum
(c) if living accommodation to be provided, state whether furnished or unfurnished, and whether suitable for married man with family:	
(i) daily allowance for food if accommodation only provided	
(ii) daily rate for accommodation and food if neither are provided in kind	
(d) daily and nightly rates of subsistence payable when away from base on duty	
(e) are costs of internal travel paid or car provided?	
(f) what leave arrangements are suggested?	
(g) extent to which free hospital and medical treatment is to be provided for the expert and his accompanying dependents, if any	
(h) shall the expert be exempted from the payment of income tax and charges of any kind imposed on or in connection with any allowances to be remitted from overseas?	Yes
(i) (i) shall the expert be exempted from the payment of customs duties and charges of any kind imposed on or in connection with the importation of equipment, machinery, materials and medical supplies as well as personal and household effects belonging to the expert and his family, including one refrigerator, one sewing machine, one radio and other electrical appliances?	Yes
(ii) In case a car is not provided to the expert by the host government, shall the expert be exempted from the payment of customs duties and charges of any kind imposed on or in connection with the importation of a car?	Yes

4. Terms and conditions of appointment (<i>Cont'd.</i>)	
(j) does host government undertake to indemnify expert in respect of damages awarded against him for actions performed in the course of his official duties?	
(k) approximate date on which the expert is required to arrive in receiving country	February 1987
(l) any other information	
5. Previous steps, if any, to fill the post:	
If any previous attempt has been made to fill the post from any external source (UN, Specialised Agency or other) please indicate:	
(a) to whom application was addressed, with date	
(b) result or present stage of negotiations	
(c) are other experts working in this area in associated projects or have there been experts working in this field previously? If so, are any reports by these experts available?	
6. Correspondence:	
Name, postal and telegraphic address of official to whom correspondence regarding this application should be forwarded	Dr. / M. K. EL DIN AHMED P.O. Box 8057 Khartoum - Sudan.

Signed

Dr. Zaki El Din

on behalf of the Government of

Sudan

Date: 18.12.1986

بسم الله الرحمن الرحيم

IBN SINA HOSPITAL

Telephone 47708
47702
47711
47712
P. O. Box 8057



مستشفى ابن سينا

٤٧٧٠٨
٤٧٧٠٢
٤٧٧١١
٤٧٧١٢
٨٠٥٧
تلفون
ص.ب

Date 18.12.1986

Mr _____ التاريخ _____

ANNEX I

JAPANESE EXPERTS

- 1/ GASTROENTROLOGY.
(INTERNAL MEDICINE)
- 2/ GASTRENTEROLOGY SURGERY OR KIDNEY TRANSPLANTATION SURGERY.
- 3/ UROLOGY.
- 4/ OTORHINOLOGY.
- 5/ RADIOLOGY.
- 6/ REDIOLOGY TECHNICIAN.
- 7/ CLINICAL LABROTARY MEDICINE.

**TECHNICAL COOPERATION
BY THE GOVERNMENT OF JAPAN**

PROPOSAL

By the Government of SUDAN

for the provision of training facilities in JAPAN

Notes: This form has been devised for the general guidance of the Government agencies concerned (Japan) in order to facilitate the supply of relevant information and data necessary to afford an adequate appreciation of the nature of the technical co-operation required. The careful completion of an application in this form will avoid much reference back and lead to speedier action.

1. Background Information

Please indicate as concisely as possible the general nature of the project, development, training programme, or other scheme which has given rise to the specific proposal below. The object of the training course being proposed should be clearly explained, together with an indication as to how the services of the personnel nominated for training will be subsequently utilized.

IBN SINA
HOSPITAL

2. Training facilities required:

Please indicate as fully as possible:—

- (a) the type of training, subject or course required, i. e., academic training, observation tour or practical attachment. If more than one type of training is required, period in each should be stated
- (b) the standard or level at which the training is to commence and the standard it is desired to attain
- (c) ultimate purpose or object of the training, and the capacity in which it is intended that the participants shall be subsequently employed

3 WEEKS

- (d) approximate length of training thought necessary for the purpose indicated above

- (e) (where technician-level training is sought)

If training facilities in this field and at this level are available in the region, please indicate why training is being sought outside the region

3. Prospective participants:

- (a) Has participant(s) already been nominated? If so, nomination Form A. 3 should be completed and should accompany this application

- (b) If no participant has yet been nominated please give the reasons and state when it is expected that the nomination will be made. In order to assist in ascertaining whether the training facilities are available or can be specially arranged, please also state—

- (i) The proposed educational qualification or standard to be held by the participant(s)

- (ii) The nature of the employment and practical experience it is expected the participant(s) would possess

- (iii) The number of participants for whom facilities are required, and whether it is desired that they should all receive training at the same time or in batches at intervals

<p>4. Previous efforts to obtain these training facilities:</p>	<p>NIL</p> <p>1</p>
<p>If application has already been made to the United Nations, the Specialized Agencies, other Technical Assistance Programmes direct, or to Governments, or private agencies, please state:—</p>	
<p>(a) date of application</p>	
<p>(b) to whom addressed</p>	<p>P.O. Box 360 KHARTOUM</p>
<p>(c) result or present stage of the application</p>	<p>SUDAN</p>
<p>5. Correspondence:</p>	
<p>Please indicate person and address to which any correspondence regarding this application can be addressed. The telegraphic address and telephone number should also be given</p>	

Signed: *Zakir Ali*

on behalf of the Government of *Sudan*

Date: *18.12.86*

TECHNICAL COOPERATION BY THE GOVERNMENT OF JAPAN

FORM OF NOMINATION

By the Government of SUDAN
for a course of training in JAPAN
requested in Form A 2, No. _____ dated 18.12.76

PART I (to be completed by nominee)

PLEASE ~~PRINT~~ TYPE

I, DR. AHMED NAGIB of
(use block letters, surname last)
SUDAN (Country) certify that the statement made by me in part II of this form are true,

complete and correct to the best of my belief.

If accepted for a Training Award, I undertake to:-

- (a) Carry out such instructions and abide by such conditions as may be stipulated by both the nominating Government and the host Government in respect of this course of training.
- (b) Follow the course of study or training, and abide by the rules of the University or other institution or establishments with which I undertake to study or train.
- (c) Refrain from engaging in political activities, or any form of employment for profit or gain.
- (d) Submit any progress reports which may be prescribed.
- (e) Return to my home country at the end of my course of study or training.

I also fully understand that if granted a Training Award it may be subsequently withdrawn if I fail to make adequate progress, or for other sufficient cause determined by the host Government.

NAGIB
(Signature of Nominee)

Date: 18.12.76

Contd.....2.

PART II (to be completed by nominee)

(Personal details)

PLEASE PRINT TYPE

1. (a) Surname (b) Forenames	IVAGIB AHMED	2. Sex Male/ Female
3. Home address	P.O.B 1570 KHARTOUM SUDAN.	
4. Date and place of birth	SUDAN. 30.12.1931	
5. Marital status	MARRIED	
6. Nationality	SUDANESE	
7. Name and address of person to be notified in emergency	ZAK AL DIN AHMED DIRECTOR IBN SINA HOSPITAL KHARTOUM - SUDAN.	

8. Education Record:

Educational Institution	Location	Years Attended From To	Degrees, Diplomas and Certificates if any	Special Fields of Study
CAIRO UNIVERSITY FACULTY OF MEDICINE	CAIRO	1952 1957	M.B., B.Ch.	MEDICINE
ACADEMY OF MEDICAL SCIENCES.	MOSCOW	1960 1963	Ph.D.	SURGERY
UNIVERSITY OF Edinburgh.	U.K.	1974 1976	GASTROENTEROLOGY DIP.	Gastroenterology

9. Please indicate details of any professional qualifications, or special industry certificates which you possess

F.I.C.S. Fellow of International
Association of Surgeons.
COURSE - Early Detection of Cancer

10. Employment Record (listing most recent post first)

(a) Present or most Recent Post

(Description of your work, indicating your personal responsibility)

HEAD DEPARTMENT GASTROENTEROLOGY
KARTOUM
HOSPITAL
HEAD DEPARTMENT GASTROENTEROLOGY
IBN SINA HOSPITAL

Name of Employer	
Address of Employer	
Type of Organisation	
Your position	Dates of Service SENIOR CONSULTANT SURGEON & HEAD OF DEPARTMENT IBN SINA HOSPITAL
(b) Previous Post (Description of your work, indicating your personal responsibility)	HEAD DEPARTMENT OF RADIOLOGY Kh. Tachang HOSPITAL
Name of Employer	
Address of Employer	
Type of Organisation	
Your position	Dates of Service
(c) Previous Post (Description of your work, indicating your personal responsibility)	
Name of Employer	
Address of Employer	
Type of Organisation	
Your Position	Dates of Service

11. It would be useful if you would give a statement of not more than 500 words regarding your experience and requirements for training. This statement should be approved by your Government.

*to be oriented in the most recent
advances of Training & Research &
Technique in GASTROENTEROLOGY*

PART III (to be completed by an authorized
official of the nominating Govern-
ment)

1. Observations of the nominating Govern-
ment on:

(a) The nominee's personal qualities, educa-
tion and employment record and knowl-
edge of English;

(b) His general fitness to benefit fully
from the course of training for which
he is being nominated;

(c) Any special reasons for his selection;
and

Contd.5.

- (d) Description of the post he will be required to fill on the satisfactory completion of this training

HEAD of The Dept. of
GASTROENTEROLOGY
IBN SINIA HOSPITAL

2. Official Nomination

on behalf of the Government of SUDAN

I certify that

- (a) I have examined the educational, professional or other certificates quoted by the nominee in Part II of this form and I am satisfied that they are authentic and relate to the nominee.
- (b) I have examined the medical certificate produced by the nominee which states that he is medically fit and free from any infectious disease and that having regard to his physical and mental history there is no reason to suppose that the nominee is other than fit to undertake the journey to Japan and to remain under training in that country.
- (c) The nominee has a knowledge of spoken and written English sufficient to enable him to follow the course of training for which he is being nominated, and that he can converse easily on everyday matters.
- (d) That the class of sea travel appropriate to the applicant's status in tourist/first class.

I nominate him accordingly on behalf of the Government of _____

Signed: _____

Rank or Title: _____

Director Ibn Sinia Hospital

Date: 18-12-1986

3. CORRESPONDENCE:

Please indicate person and address to which any correspondence regarding this form can be addressed. The telegraphic address should also be given

**TECHNICAL COOPERATION
BY THE GOVERNMENT OF JAPAN
FORM OF NOMINATION**

By the Government of SUDAN
for a course of training in JAPAN
requested in Form A 2, No. _____ dated 18/12/1986

PART I (to be completed by nominee)PLEASE ~~PRINT~~ TYPE

I, DR YAHIA ABDEL RAHMAN of
(use block letters, surname last)

SUDAN (Country) certify that the statement made by me in part II of this form are true,

complete and correct to the best of my belief.

If accepted for a Training Award, I undertake to:-

- (a) Carry out such instructions and abide by such conditions as may be stipulated by both the nominating Government and the host Government in respect of this course of training.
- (b) Follow the course of study or training, and abide by the rules of the University or other institution or establishments with which I undertake to study or train.
- (c) Refrain from engaging in political activities, or any form of employment for profit or gain.
- (d) Submit any progress reports which may be prescribed.
- (e) Return to my home country at the end of my course of study or training.

I also fully understand that if granted a Training Award it may be subsequently withdrawn if I fail to make adequate progress, or for other sufficient cause determined by the host Government.

YAR
(Signature of Nominee)

Date: 18/12/1986

Contd.....2.

PART II (to be completed by nominee)
(Personal details)

PLEASE PRINT TYPE

1. (a) Surname (b) Forenames	ABDEL RAHIM YAHIA	2. Sex Male/Female	
3. Home address	PO BOX 360 KHARTOUM SUDAN		
4. Date and place of birth	KHARTOUM 11/11/87		
5. Marital status	MARRIED		
6. Nationality	SUDANESE		
7. Name and address of person to be notified in emergency	DR ZAKI ELDEEN AHMED DIRECTOR IBN SINA HOSP KHARTOUM		

8. Education Record:

Educational Institution	Location	Years Attended From To	Degrees, Diplomas and Certificates if any	Special Fields of Study
FACULTY OF MEDICINE	CAIRO	1954-61	MB BCh	
ROYAL COLLEGE OF URBEOLOGY EDINBURGH	UK	1967-70	F.R.C.S	UROLOGY
INSTITUTE OF UROLOGY	UK	1973-76		

9. Please indicate details of any professional qualifications, or special industry certificates which you possess

MEMBER OF BRITISH
ASSOCIATION OF UROLOGICAL
SURGEONS

10. Employment Record (listing most recent post first)

(a) Present or most Recent Post

(Description of your work, indicating your personal responsibility)

HEAD UROLOGY
DEPARTMENT IBN SINA
HOSPITAL

Name of Employer		
Address of Employer	MINISTRY OF HEALTH SUDAN	
Type of Organisation	PO BOX 8057 KHARTOUM SUDAN	
Your position	Dates of Service	SENIOR UROLOGIST
(b) Previous Post (Description of your work, indicating your personal responsibility)	HEAD DEPARTMENT OF UROLOGY KHARTOUM HOSPITAL	
Name of Employer		
Address of Employer		
Type of Organisation		
Your position	Dates of Service	
(c) Previous Post (Description of your work, indicating your personal responsibility)		
Name of Employer		
Address of Employer		
Type of Organisation		
Your Position	Dates of Service	

11. It would be useful if you would give a statement of not more than 500 words regarding your experience and requirements for training. This statement should be approved by your Government.

TO BE ORIENTED IN THE
TECHNIQUE, TRAINING AND
~~RESEARCH~~ RESEARCH WORK
TOMA TO STRENGTHEN THE
RELATIONSHIP BETWEEN
JBN SINA HOSPITAL AND
OKAYAMA UU UNIVERSITY.

PART III (to be completed by an authorized
official of the nominating Govern-
ment)

I. Observations of the nominating Govern-
ment on:

- (a) The nominee's personal qualities, educa-
tion and employment record and knowl-
edge of English;
- (b) His general fitness to benefit fully
from the course of training for which
he is being nominated;
- (c) Any special reasons for his selection;
and

Contd.5.

- (d) Description of the post he will be required to fill on the satisfactory completion of this training

2. Official Nomination

on behalf of the Government of

I certify that

- (a) I have examined the educational, professional or other certificates quoted by the nominee in Part II of this form and I am satisfied that they are authentic and relate to the nominee.
- (b) I have examined the medical certificate produced by the nominee which states that he is medically fit and free from any infectious disease and that having regard to his physical and mental history there is no reason to suppose that the nominee is other than fit to undertake the journey to and to remain under training in that country.
- (c) The nominee has a knowledge of spoken and written English sufficient to enable him to follow the course of training for which he is being nominated, and that he can converse easily on everyday matters.
- (d) That the class of sea travel appropriate to the applicant's status in tourist/first class.

I nominate him accordingly on behalf of the Government of

Signed:

Rank or Title:

Date:

3. CORRESPONDENCE:

Please indicate person and address to which any correspondence regarding this form can be addressed. The telegraphic address should also be given

**TECHNICAL COOPERATION
BY THE GOVERNMENT OF JAPAN
FORM OF NOMINATION**

By the Government of SUDAN
for a course of training in JAPAN
requested in Form A 2, No. _____ dated 18.12.86

PART I (to be completed by nominee)PLEASE **TYPE**

I, DR. ABU EL GASIM ELHAD of
(use block letters, surname last)

SUDAN (Country) certify that the statement made by me in part II of this form are true,

complete and correct to the best of my belief.

If accepted for a Training Award, I undertake to:—

- (a) Carry out such instructions and abide by such conditions as may be stipulated by both the nominating Government and the host Government in respect of this course of training.
- (b) Follow the course of study or training, and abide by the rules of the University or other institution or establishments with which I undertake to study or train.
- (c) Refrain from engaging in political activities, or any form of employment for profit or gain.
- (d) Submit any progress reports which may be prescribed.
- (e) Return to my home country at the end of my course of study or training.

I also fully understand that if granted a Training Award it may be subsequently withdrawn if I fail to make adequate progress, or for other sufficient cause determined by the host Government.

A. El Had
(Signature of Nominee)

Date: 18.12.86

Contd.....2.

PART II (to be completed by nominee)
(Personal details)

PLEASE PRINT TYPE

1. (a) Surname (b) Forenames	ELHADI ABU ELGASIM	2. Sex Male/Female
3. Home address	P.O. BOX 2032 KHARTOUM SUDAN	
4. Date and place of birth	27.9.36	
5. Marital status	MARRIED	
6. Nationality	SUDANESE	
7. Name and address of person to be notified in emergency	DR ZAHY ELDEEN DIRECTOR GEN. SGT. HOSPITAL P.O. BOX 1111 KHARTOUM SUDAN	

8. Education Record:

Educational Institution	Location	Years Attended		Degrees, Diplomas and Certificates if any	Special Fields of Study
		From	To		
1- FACULTY OF MEDICINE	CAIRO	1954	1960	M.B., B.Ch.	MEDICINE
2- ROYAL COLLEGE OF SURGEONS OF EDINBURGH	U.K.	1967	1970	F.R.C.S.	E.N.T.

9. Please indicate details of any professional qualifications, or special industry certificates which you possess	FELLOW OF THE INSTITUTION OF ASSOCIATION OF - GORHAM - ALD...
10. Employment Record (listing most recent post first) (a) Present or most Recent Post (Description of your work, indicating your personal responsibility)	SENIOR E.N.T. CONSULTANT MINISTRY OF HEALTH HEAD OF E.N.T. DEP. KHARTOUM HOSPITAL PART-TIME LECTURER FACULTY OF MEDICINE KH. UNIVERSITY

Name of Employer	MINISTRY OF HEALTH SUDAN	
Address of Employer	P.O. BOX 8052 KHARTOUM SUDAN	
Type of Organisation	SENIOR S.N.T. CONSULTANT	
Your position	Dates of Service	AND HEAD OF DEPARTMENT ABN SAN HOSPITAL
(b) Previous Post (Description of your work, indicating your personal responsibility)		
Name of Employer		
Address of Employer		
Type of Organisation		
Your position	Dates of Service	
(c) Previous Post (Description of your work, indicating your personal responsibility)		
Name of Employer		
Address of Employer		
Type of Organisation		
Your Position	Dates of Service	

11. It would be useful if you would give a statement of not more than 500 words regarding your experience and requirements for training. This statement should be approved by your Government.

TO BE ORIENTED IN THE
RECENT ADVANCES IN TECHNIQUE
TRAINING AND RESEARCH IN
E. N. T. SPECIALTY

PART III (to be completed by an authorized
official of the nominating Govern-
ment)

1. Observations of the nominating Govern-
ment on:

(a) The nominee's personal qualities, educa-
tion and employment record and knowl-
edge of English;

(b) His general fitness to benefit fully
from the course of training for which
he is being nominated;

(c) Any special reasons for his selection;
and

Contd.5.

- (d) Description of the post he will be required to fill on the satisfactory completion of this training

HEADSHIP OF THE ENT
DEPARTMENT IN THE
HOSPITAL

2. Official Nomination

on behalf of the Government of SUDAN

I certify that

- (a) I have examined the educational, professional or other certificates quoted by the nominee in Part II of this form and I am satisfied that they are authentic and relate to the nominee.
- (b) I have examined the medical certificate produced by the nominee which states that he is medically fit and free from any infectious disease and that having regard to his physical and mental history there is no reason to suppose that the nominee is other than fit to undertake the journey to JAPAN and to remain under training in that country.
- (c) The nominee has a knowledge of spoken and written English sufficient to enable him to follow the course of training for which he is being nominated, and that he can converse easily on everyday matters.
- (d) That the class of sea travel appropriate to the applicant's status in tourist/first class.

I nominate him accordingly on behalf of the Government of SUDAN

Signed: Zakir Ali

Rank or Title: Director Bahria Hospital

Date: 18.12.1986

3. CORRESPONDENCE:

Please indicate person and address to which any correspondence regarding this form can be addressed. The telegraphic address should also be given

6. 機材（フォローアップ）チーム報告書

(1) 目 的

本プロジェクトにおける医療機材は、相手国側の政情等の事情により日本側の具体的技術協力が開始されないまま、事実上相手国側が独自にこれら機材を使って活動していたこともあり、一部機材に故障等が見られるとの関係者の指摘があった。

他方、わが方は62年2月頃から具体的協力の開始を予定しており、それまでにこうした機材の修理を行い、完全に稼働できる体制にすることが技術指導上極めて重要であることから、フォローアップ・チームを派遣して機材の稼働状況の把握を行い、対応措置の検討と可能な限りの修理を行うこととなったものである。

(2) 派遣期間 昭和61年11月7日～11月16日

月 日	曜日	内 容	要
11/7	金	東 京 発 (20:55)	
8	土	ハルツーム着 (20:40) 金子書記官出迎え	
9	日	日本大使館にて牛田参事官、越智、金子書記官と日程打合せ (9:30) ハルツーム教育病院にて病院長、副院長、総婦長等病院関係者と作業日程等打合せ。 引続き院内を視察し院長の説明を受ける (10:00～14:00)	
10	月	病院内を巡回し、各部門の Chief doctor 等より故障状況の説明を受け作業を行う。(8:30～16:00)	
11	火	病院にて作業 (9:00～10:00, 11:00～15:30) WHO 専門家 Dr. Vort と懇談 (院長同席) (10:00～11:00) 病院長宅で夕食会 (病院各部門の chief doctor 同席: 8:30～11:00)	
12	水	病院にて作業 (8:30～15:00) 報告内容について国内打合せ (18:00～19:00)	
13	木	病院長へ作業結果及び今後の対策について説明 (11:00) 日本大使館へ同上報告 (13:00)	
14	金	ハルツーム発 (00:30) 越智、金子書記官見送り。	
15	土		
16	日	東 京 着 (16:00)	

(3) チーム構成

業務調成	清水 嘉一郎	JICA 医療管理課
一般医療機器	館 野 勝 雄	光電メディカル(株) 代表取締役
放射線機器	山 田 勝 亮	東芝那須工場 製造部技師

(4) 業務報告

1) 実施手順

- ① 病院機器全般の視察を行い、故障等の機器の把握を行った。
- ② 各部門の chief doctor より故障状況及び問題点の説明を受け、機材のチェック、調整及び修理を実施した。
- ③ 病院長へ結果報告

2) 調査結果

別紙のとおり

3) 今後の対策について

調査、点検の結果、当面次の対策を構じる必要がある。

① X線機器

a Mobile 型（故障箇所の究明に全力を挙げた）

→ 早期に当該領域の技師派遣が必要

b 据付型（X線照射不能修理完了）

→ 照射ベッドの動きが重い等若干解決を要する問題があり、上記技師派遣時にパーツ交換を行う。

② 一般医療機器等

a 手術室無影灯回転調整（Joint 部の調整を試みたが修理未了。応急措置としてカメラケーブルの位置調整を行った結果若干すべりが小さくなった）

→ Joint 部接触部分の摩耗が原因とみられ、現地側修理技師にパーツの交換方法を教授した。

パーツを送付し、交換させる。

b 手術台固定支持棒の破損

→ 新たに支持棒を送付して現地技師に交換させる。

c Urodynamic Jast System 1152

（レコーダー作動せず。Intrnction Serime マニュアル共なし）

→ レコーダー用トランスを送付し、現地技師に交換させる。

マニュアル類はメーカー等に照会の上、入手次第送付する必要がある。

d 泌尿器純水製造装置（圧力が小さく、必要な純水量充分得られない。点検したが原因不明）

→ 取水圧力は充分あり、当面はフィルター取換えを度々行う方法で様子を見る必要がある。

e ボイラー（完全に作動せず）

→ 施工業者が責任をもって修理する。

f ボイラー送水用純水製造装置（ろ過水が充分得られない。）

→ 施工業者が修理する。

g 超音波診断装置

（モニター画面の映像が部分画面となっている）

→ 専門技術者の派遣が必要

h 消化器鉗子

（先端部故障，現場修理不能）

→ 本部にて修理し，12月ミッションが携行する。

③ その他

乾電池，フューズ，純水製造用フィルター，試薬類，製精塩，透析用水，LPガス（ブタン），手術室TVカメラレンズカバー，修理工具及び計測器

→ 一部は12月ミッションで携行

その他専門家携行機材にて対応

(5) 機器保守管理上の問題点

1) 水質が極めて悪く，中・長期的には一部医療機器のみならず病院設備全体にも大きな影響を及ぼす恐れがある。

→ 病院全体へ供給する水の一次ろ過装置が必要


2) 停電による機器の故障を防止するために所要の機器に対しては電源安定装置の設置が必要。

3) Service engineerには比較的優秀と思われる人材があり，これを組織的に効果的に活用する方法を考えるべきである。

又諸外国で先進技術を修得した者が，帰国後その技術を他の者に伝播するようなシステムを病院内に設定する必要がある。

(医療機器関係)

調 査 報 告 書

銀野 勝雄 

問題点と対策

1A 2A

1. Section: Gastro-Enterology

サービスマニュアル, 等も管理されており, 特に問題なし。

先生方もこの Section には特に熱心で, 良く器材が活用されている。

要望事項 Gastro Camera - TV モニターを接続するアダプターが欲しい。

学生実習で見せる為,

2. Section: E. N. T

2C-11

① daryngo Stroboscope LS-3

問題点 ① ランプハウスのランプ点灯せず

② サービスマニュアルなし

対策 クセノンランプ及びサービスマニュアルを準備すること。

2C-20

② Diagnostic Instrument Set (検眼鏡)

BX-12345

問題点 ① 3台あるが3台とも電池がなく使用されている。

対策 使用頻度が高いので早急に電池の補給が必要

(現地で単2電池の購入が難しいとの事)

C-23

③ Dry-Temporal Bone Surgery Set

問題点 ① ハンドピースが回転せず熱をもつ

② チップ取付ホルダー(ハンドピース用)のスペア破損

③ サービスマニュアルがない

対策 ハンドピースそのものは問題ないが, チップが破損しているのでチップ(スペア共)及びサービスマニュアルの補給必要有

3. Section: Laboratory

2D-3

① Flame Photometer

問題点 ① 試薬不足 有効期限ぎれで器械が使えなくなっている

② LPガス 期限ぎれ

対 策 ① 試薬メーカー，LPガスメーカーへ期限ぎれの確認
(使用不能か否か)

② 不足品に対する補充検討必要有

Cat. № 00156105J

00156183M

00156100A

00478520

LPガス 〈 現地産のブタンガスでOK 〉
要通報

- 試 薬 -

2D-12

② Chloride Analyzer 925-P

問 題 点 ①と同様

対 策 試薬 Cat. № 00156202K } 補充検討必要有
00156206P }

2D-16

③ Na & K Analyzer 902

問 題 点 ①，②と同様

対 策 試薬 Cat. № 00156040H } 補充検討必要有
00156003P }
00156041J }

2D-23

④ Blood Gas Analyzer 168

問 題 点 ①，②，③と同様

対 策 試薬 Cat. 477020 477571 }
477177 477068 } 補充検討必要有
477991 477073 }
477019 }

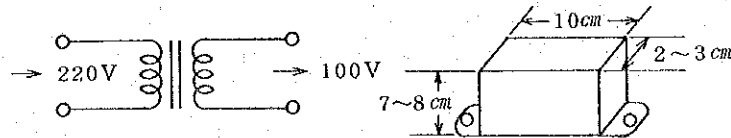
4. Section: Urology

2B-16

① Urodynamic Test System model 1152

(dite-Tech Instruments Inc. USA)

- 問題点 ① 取説，サービスマニュアルなし
 ② 電源トランス（レコーダー用）不良，二次側の出力が断線
- 対策 ① 取説，サービスマニュアルを送る事
 ② トランス（№241-7-1598）を送るか又は



上記仕様のトランスを送れば，Eng Yassin 又は Eng Eljack が修理内容を指導しているので交換出来る。

② 透析用純水製造装置

- 問題点 ① 透析用純水製造のフィルターがない為，純水が作れない。
 ② 純水の量の問題については，検討する必要有
 ③ Nacl がない。
- 対策 ① 水道水がかなり不純物が多く，フィルターの目づまりが早く，短時間の使用で純水製造量が半減してしまうので，かなりの頻度でフィルター交換の必要有 十分なフィルターの補充が必要
 ② フィルターのろ過能力と合わせて検討する必要有
 Calcium $10\text{mg}/\ell \rightarrow 3\text{mg}/\ell$ にする為の十分な純水量が得られない。
 Magnesium
 ③ 精製塩 NaCl <セメント袋2>がない 現地で入手不可能 これまでは一部ヨーロッパから入手したこともあるとの事

2B-20

③ Artificial Kindy System DAE-02/DCS-31

- 問題点 ① 上記に使用しているベリソリタGは強すぎるのでベリソリタにして欲しい。ベリソリタ，ベリソリタG共に在庫あるが，そろそろ期限ぎれが近づいている。
 ② キンダリー液3号が全くなくなっているので至急補充して欲しい。現地で購入不可
- 対策 期限ぎれのもの，使用出来ないもの，不足しているものの補充，特にキンダリー液3号（透析用）は人命にかかわるので早急に補充の必要有

5. Section : Operating Theatre Department

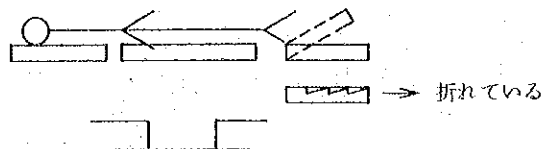
2I-3

① Transurethral Operating Table M

問題点 足を乗せる台の角度が調整出来ない。

対策 角度調整台が破損しているので交換する必要有

但しメーカーは受注生産なので1～2ヶ月の納期が必要

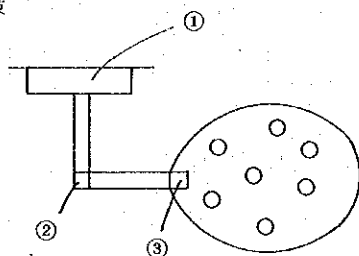


2 I - 4

② Operating Light CTC-Kr 9855-56 EL

問題点 無影灯が自然に動いてしまう。ランプ切れ

対策



①及び②については修理完了 Mr Yassin
を指導しているので、それと、修理工具一
式手渡す。

③については、修理パーツを送るので Mr.
Yassin が修理すると思われる。

③は照明板の角度が自然に動いてしまう。

ランプ切れは、Mr. Yassin がスペアパーツを管理しているので修理済

③ 2 I - 4

ITV カメラ装置 (無影灯へ取付け)

問題点 ① カメラコードの取付不良の為、無影灯のバランスへの影響あり

② ITV カメラ用 レンズカバーなし

対策 ① 応急処理はしたが、カメラコードは割合重量があるので取付方法に工
夫必要有

② フジノンTVズームレンズ(558273C 10×16)のカバーがないと
カメラ自身の寿命を半減するので至急送る事(2ヶ)

④ 2 I - 24

Water Sterilizer 3

問題点 フィルターがない。

対策 手術室以外でも何台が入っており、すべてフィルターがなくなっており、早
急にかかなりの量を補充必要有

そろそろ滅菌灯の効果もなくなって来ているので交換部品を用意する事

6. Section : Training unit department

① VTR System for ERCP Room

問 題 点 画像が出ない。

対 策 点検 オペレーション（接続）指導

所 見

本年8月にオープンし、想像以上に彼等独自に工夫され、医療器械が活用されておられた。職員の皆様もスーダンで最も近代的な病院であることの“ほこり”と熱意が感じられ今後の運営が楽しみです。

しかし、日本側のフォローの不十分さ等もあり、医療器械の個々の面でトラブルがあり、その面を十分フォローして差し上げれば、スムーズに活用されることと感じられた。（オペレーション技術、メンテナンス）医療器械のオペレーション技術、メンテナンス技術は現地担当を教育（現地で）指導すれば良いと思う。実地指導の場合、各セクションの日本側との窓口を決めて貰い、そのメンバーに対して製品管理も含めて十分なフォローを行えば良いと思われます。

特にメンテナンスに就いては、Service Engineer Mr. Yassin, Mr. Eigack あたりが良く器械を理解しておられるので、下記の工具等を準備してあげれば、かなりの器械の修理が可能と思われます。

- ① 各種ヒューズ（ガラスチューブのもの） 0.5A 1A 2A 3A 5A
- ② 六角レンチセット
- ③ Boxレンチセット
- ④ テスター
- ⑤ オシロスコープ（使いこなせる）
- ⑥ 電池（UM-2, 3, 1）

最後に日本側のフォロー対策としては、当面（2～3年）十分現地のニーズを理解している人を窓口として、各メーカーと十分技術的交渉が可能な人をコンサルタントとして実施すれば、現地のニーズに合ったフォローが可能と思われます。医療関係の場合は、人命にかかわる問題なので、大きな器械もさることながら、患者と直接触れる細かい器械（各種鉗子、トランスジューサ、電極……）のフォローが大切です。

ME器械に就いては、オペレーターに器械の操作だけでなく、医師が必要としているデータをとることが（各種ME器械、XRangの条件設定等……の判断が出来る様なアプリケーションウェアの指導教育）レベルアップにつながると思います。

日本側として特にコミュニケーション不足（現地の実情の理解）を痛感致しました。

基本的な問題点としては、水質対策（ボイラー、透析、ラボ、手術室等）が考えなければ
ならないと思います。特に Na^+ 、 Ca^{2+} が 10 mg/l があり、今の時期は気候の条件が良いが
砂嵐の時期にはかなり水質が悪くなると考えられます。

次に各器械に対して、ひんぱんに起る停電が色々な形で影響しております。

現在も色々な問題が出ており、2～3ヶ月程度問題点処理のフォローが必要と考えられます。

以 上

X 線 装 置

山 田 勝 亮

○ 目 的

スーダン KHARTOUM TBAINING HOSPITAL へ納入した当社製品 8 set
(内 超音波装置 1 set) のトラブル状況の把握

○ 結 果

- X線装置 7 set 中 3 set はトラブル無しで使用中
- トラブルがおきているX線装置で 3 set は完全ではないが使用可能状態まで修理
- 残り 1 set のX線装置は使用不可能状態
- 超音波装置はクレームのみ把握

○ 問 題 点

1. 現地の電源不安定、特に停電が時々ある。
2. IC等の部品が入手できない。
3. 砂ほとりが多く、装置に対して環境が良くない。
4. オペレーションを完全にマスターしていない。
5. エンジニアのレベルが低い。

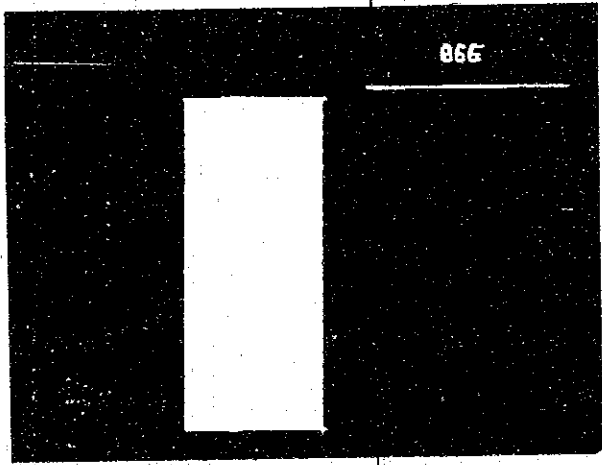
○ フ ォ ロ ー

今回の出張で修理できなかったトラブルの早期修理が必要と思われます。トラブル内容は 2 ページ以降にて報告します。

また、装置と同時に送ったフィルム現像液等全て期限切れのものばかりです。

2. トラブル調査及び修理

			MEDICAL EQUIPMENY
No.	ト ラ ブ ル 内 容	対 策	LIST ITEHNO. フォロー
1	DT-GCR B 3572052 DC-850B-2 D 4542725 TAC-25-UN 905306 TAC-25-N5		I Tem ND, 2G-4
①	X-RAY ON しない	DC-850B2 RYPWB内 IC不良 交換	交換にてOK
②	F. X-RAY ONしない	DC-850B-2 RYPWB内 IC不良 交換	"
③	同時曝射防止装置を通すとX線が出ない	同時曝射防止装置内のROOM 4 スイッチON 状態で使用中 未修理	サ1
④	パワーアシスト動作しない	アシストレバーのマイクロスイッチ位置再調整	再調整にてOK
⑤	絞り縦羽根動かない	未修理	サ1
⑥	APERTURE AUTO/MANUAL SELECTON SWITCH をONすると SPOT X-RAYができない	未修理	サ1
⑦	フィルムチェンジャー連動でX線がでない	DC-850B-2 端子板 28~29間に渡り線を入れ使用中 未修理	サ1
2	DT-KEL 4552064 DC-550A 4562314		I tem NO. 2G-2
①	SPOT内 DCモーターが動かない	DCモーター交換, しかしカセットホルダーが完全にもとらないため, 手でアシストしている。再発の可能性あり。 未修理	サ1
②	絞り片羽根が動かない	未修理	サ1

№	ト ラ ブ ル 内 容	対 策	フ ォ ロ ー
③	天板動かない	ヒューズカッターがONしていたので復帰させマイクロスイッチ位置再調査	再調整にてOK
3.	HYDRADJUST-II DC-850B-2 MS-302P(絞リ) 4040799		I tem NO 2G-1
①	天板上下, 左右動かない	未 修 理	
②	X-RAY ONしない	DC-850B-2 内 RY PWB IC不良 交 換	交換にてOK
③	絞リ片羽根動かない	<ul style="list-style-type: none"> ・クラッチが不良になっている ・ギヤのかみ合せが不良になっていてマニュアルでも動かない 	絞りを交換したほうが良いかも知れない?
4.	SXT-6-10A 4512012		I tem NO 2A-37
①	X-RAY ONしない	<ul style="list-style-type: none"> ・R.もF.もX-RAYがでない ・X-RAY FILD LAMPが点灯しない ・加熱UNITの音はするがF. ONしても音の変化はない システムダウン状態 	サ1
5.	SXT-6-10A 特に問題なく使用中	ノイズ有	I tem NO 2I-45
6.	KCD-10M-6AT T3544384 特に問題はないが未使用	ドクターはX線はでないと言っているが調査したかぎりでは問題ないと思われるX線もでている	I tem NO 2J-6
7.	SSL-53M ① モニター面がせまい		I tem NO 2E-3 サ2
			
8.	KXO-12MB DT-BTF 特に問題なく使用中		I tem NO 2G-3
9.	AUTO-MED IC (自動現像機) SR-90 NO.8200684 メーカー YOKOYAMA フィルムを送るローラー用のモーターが熱くなるとのクレーム有り モーターに放熱用のタオルをまいて使用中	通常のモーターの熱さを知らないため状況報告のみ <ul style="list-style-type: none"> ・オリエンタルモーター 51K40 RGK-A2 ・オリエンタルモーター(ギヤ) 5GK 6K 	

3. 問 題 点

- 砂ほこりが多く装置を開くと砂がたまっていた。
- 電源事情が悪く、時々停電する。また LINE 電圧も 常に変化しているため、LVサーボが常に動いていた。
- オペレーターに対するオペレーションサービスを実施した方が良いと思われる。
マニュアルはあまり読んでいないようです。
- トラブルがおきても使用して、トラブルを拡大しているようです。
- トラブルがおきたとき修理、調査できるエンジニアがいない。

4. 感 想

- 出張前のトラブル報告書では、3 件のみでまた内容不十分により事前にパーツの確保等が十分にできなかった。

現地に行ってみると、各システムがかなりのトラブルを持っており、トラブル状況の調査に手まどり修理まで行い時間もパーツもなかった。

IC不良等のトラブル、絞りの動作不良がX線システム 3 set に共通しており、何らかの問題があるのではないかとと思われる。

作業時間も AM 8:00 ~ PM 2:00 までと制限があり、次回修理に行かれる場合、時間の余裕とパーツを十分に持参した方が良いでしょう。

JICA